SECRET
(When Filled In)

SPEED LETTER

REPLY REQUESTED YES [ ] NO

DATE 2-9-67

LETTER NO. 954-296

25X1A 25X1A

TO : NPIC-P&DS

ATTN: [redacted]

FROM: WCPO

RE: [redacted] 25X1A

Per Contractor's "Cumulative Claim and Reconciliation Statement" they have expended costs of [redacted] which exceeds Contract 25X1A ceiling of [redacted] To allow payment of the claim WCPO ceiling, the funding should be increased by [redacted] 25X1A

25X1A

Therefore you are requested to issue a requisition in the amount of [redacted] 25X1A to increase funds for [redacted] 25X1A at your earliest convenience.

[redacted]

Faux

REPLY

DATE

DECLASS REVIEW by NIMA/DOD

SIGNATURE

RESPONDER'S FILE

FORM 5-61 1831

SECRET

STATINTL

[redacted]

Paul:

I've looked over the papers and reports you left with me re: Direct Image Viewer. It appears to me that there is precious little we can do that has not already been done (quite competently) by [redacted] and reported in STATINTL their final report. About all we could possibly do would be to confirm some of their measurements. That is, we could insert resolution targets and read their values - and you already are aware of the resolution capabilities from your own tests.

Those who've seen the instrument unanimously agree the design was good. Actually, because of the nature of the program, the design is better than we have a right to expect. The specifications are written loosly and the good design resulted from a consideration of integrity on the contractor's part. There is very little we could do in this area for you other than to confirm what is patently obvious.

As a piece of equipment, I have very few reservations about this one: it meets most of the requirements we set out to obtain, and because of the sort of program that it was, we can hold them to very little in the way of performance. Those critical areas of performance have been checked, and appear to be satisfactory. My feeling is that we need no further tests (of an acceptance nature) before accepting the equipment and completing the contract, and I propose none.

STATINTL

The real problem with this instrument is the grating. The [redacted] grating meets specs, but is unacceptable because of the banding - something which is entirely subjective and could not be specified against. The ruling method for gratings is eliminated by this grating - no such technique will ever be completely free of blaze, the prime cause of this banding. Our only hope presently lies in producing a grating in the laboratory which will be acceptable quality: then we can properly evaluate the viewer. I guess we've said this before.

STATINTL

So, after looking the situation over, I recommend that no additional tests be carried out on this instrument until we obtain a better grating. I submit that [redacted] has carried out its work well and that we ought to STATINTL close out the contract or whatever you want to do with it, without any more engineering or scientific fanfare. It's up to us now to produce the better grating !

[redacted]

6 June 1966

GRATING COMMENTS

#469 HAS VARIABLE DENSITY WAVES OVER VIEWING AREA

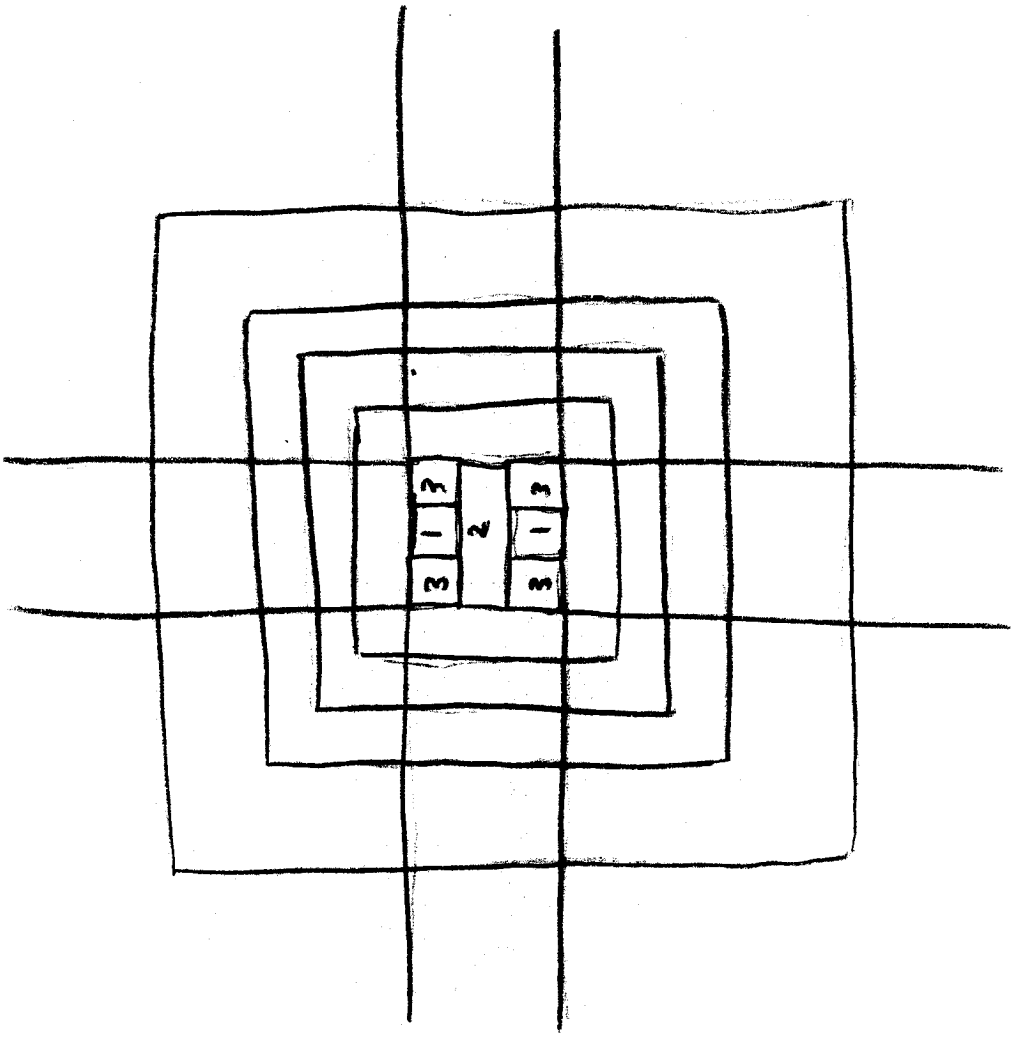
RESOLUTION SATISFACTORY

#229 VISABLE SURFACE DEFECTS OVER VIEWING AREA

RESOLUTION DEGRADED BY GRATING

#469 PLUS #229 DIFFICULT PROBLEM IN GRATING SURFACE ALIGNMENT TO PREVENT INTERFERENCE FRINGE CONDITION

RESOLUTION DEGRADED BY GRATINGS.



Approved For Release 2002/06/17 : CIA-RDP78B04747A001500020033-8

42-383

EXIT PUPIL BRIGHTNESS RATIO MEASUREMENTS

CUSTOMER GRATINGS TESTED ON VIEWER 3/9/66

			2					1
			3				2	
#469	PLUS	229	5				2	
			5			3		
			12		5			
			192	32				
			77	50	10	5	3	2	2
								1
			3				1	
			4					
			6				3	
#469	ALONE		10			4		
			32		10			
			170	53				
			1370	187	35	15	8	4	3
			3					1
			3				2	
			5				2	
#	229	ALONE	8			4		
			14		9			
			54	31				
			60	85	12	9	12	5	3

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STATINTL

10 X 10 GRATINGS

Greatest Difference 40 TO 16 2.5 : 1

Greatest Adjacent Difference 30 TO 19 1.6 : 1

Darker bands appear at 3 6 9-11 orders.

Measurment across bands.

BAND	0	3		6	7	10	12
VALUE	30	26	35	23	32	22	36

Brightest spots - were four out side corners and upper edge

Dimest spots were cross over of 9 & 10 orders.

11-2-65

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GRATING # 281

MICRO WATTS / CM² 5000 - 5300 A°

						10						9
						15					5.6	
						26				16		
						64			21			
						150		72				
						900	225					
11	15	26	64	150	900	15,000	900	150	64	26	15	8
					200	900	225					
				65		125						
			19			64						
		11				22						
	5.6					11						
4.8						8						

11-2-65

[redacted]

STATINTL

[redacted] grating — 1) more bands in exit pupil than w. 2"

2) contrast restrictions met, though (max. adj. 1.6:1, max. overall 2.5:1)

3) resolution falls off to corners (fcn. of obj. lens — 200 l. on axis)

4) larger field (10") produces more distracting band flicker than 2"; not same as 2" area — head movement much more critical, esp. backward + forward

STATINTL

STATINTL

[redacted] grating — 1) resolution as good as [redacted] (better than 1st)

2) very bright (intolerable) central order

3) distraction less to some degree than [redacted] STATINTL in horiz. image to 1 eye brightens as other decreases, integration (averaging?) by visual system makes horiz. effect minimal; vertical much greater; constant gradation of intensity (no bands) yields less distraction even tho adjacent contrasts greater than [redacted]

STATINTL

TATINTL

[redacted] magnetic attachment improved image from lenticular screen originally inadequate

2nd viewer overhead to come down to 15¢/o

F-E chips warped slightly, so out of focus (damaged 6 F-E)

delivery could be early December, but will wait if R.S. & P.S. come out 2nd week Dec (3 days shipping time)

Shipping address? - (air freight)

STATINTL

cameras in U-2 for [redacted] 150 lbs.
12" f.l. eq. in resolu. to 36" now used
30° stereo convergence
filter changers controlled from cockpit
STATINTL experimental platform for sat. reconnaissance STATINTL
STATINTL [redacted] said work w/ [redacted]
[redacted] would fit in w. filter com STATINTL
lination studies to be performed by [redacted]